Further, the specification has been amended to include the serial numbers and patent numbers for the referenced patent applications and patents.

The rejection of claims 1-4, 10, 13-14, 16-18, 20, 21, 23 and 24 as being anticipated by Rios (U.S. Patent No. 4,277,705) is traversed. Claim 1 requires that the tension rod extends "between the pair of side sections of the coil winding and through said rotor" and that the housing on the coils attaches to the tension rod. Claim 1 has been amended to require the ends of the rod to be adjacent the coil winding.

In contrast to the claimed tension rods, the cross bolts (32) shown in Rios do not extend between opposite sides of the coils. The cross bolts extend perpendicularly through the coils and secure the assembly of winding modules and housing that form the rotor core. The cross bolts in Rios also do not have ends that are adjacent to the coils. Further, the Rios cross bolts do not attach to the coil housing that wrap around the coil windings. Accordingly, Rios teaches the claimed tension rod and does not anticipate the claims of this application.

Further, Rios does not anticipate several of the dependent claims for the additional reasons that Rios does not disclose a U-shape channel as recited in dependent claim 2; or the dowel core 10 coupling the tension rod to the housing as recited in claims 5-9, 19, 25 and 26.

Claims 5-9, 11-12, 15, 19 and 25-27 are not obvious over Rios in view of Laskaris (U.S. Patent No. 3,991,333) for substantially the same reasons as stated above. Further, Laskaris '333 does not disclose a tension rod extending between

coils such that the ends of the tension rod are adjacent to the coils. In Laskaris '333 and Rios, the cross bolt extends perpendicularly through the plane formed by the coil. The cross bolts hold a stacked assembly of rotor plates and coil winding assemblies together. Laskaris '333 and Rios teach away from orienting a tension rod such that its ends are adjacent to coil sides and provide coil support.

Rios is directed to a heat conductive mesh with an adhesive material that attaches to the rotor winding (rather than the coil support). See Rios claims. The coil supports shown in Rios are support plates (28) that are continuous structural members, rather than the discrete support tension rods disclosed in the present application. The support plates and coils of the Rios patent are held in place by a cylindrical shell 23 and cross bolts 32, which are completely different than the tension rods of the present invention. Accordingly, it would not have been obvious to modify Rios in view of Laskaris '333 to form the present invention. Further, the laminated rotor structure disclosed in the Rios patent is at cryogenic temperature, while the solid rotor in the present invention is at ambient temperature, and only the coils and support rods are at cryogenic temperature.

In addition, the rejection of claim 22 as being obvious over Rios in view of Nottingham (U.S. Patent No. 4,072,873) is traversed for substantially the same reasons as stated above as to why Rios does not anticipate or render obvious any claim. Further, the clamps disclosed in Nottingham do not suggest that the Rios cross bolts be modified to extend between the coils. Accordingly, Rios in

combination with Nottingham would not have rendered the subject matter recited in claim 22 to have been obvious.

All claims are in good condition for allowance. If any small matter remains outstanding, the Examiner is requested to telephone applicants' attorney. Prompt reconsideration and allowance of this application is requested.

Attached hereto is a marked-up version of the changes made to the specification and claim(s) by the current amendment. The attached page(s) is captioned "**Version With Markings To Show Changes Made.**"

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE ABSTRACT

HIGH TEMPERATURE SUPER-CONDUCTING SYNCHRONOUS ROTOR COIL SUPPORT WITH TENSION RODS AND METHOD FOR ASSEMBLY OF THE COIL SUPPORT

ABSTRACT OF THE DISCLOSURE

A rotor for a synchronous machine is disclosed comprising: a rotor; a super-conducting coil winding extending around at least a portion of the rotor, [said] the coil winding having a pair of side sections on opposite sides of [said] the rotor; at least one tension rod extending between the pair of side sections of the coil winding and through conduits in [said] the rotor; and a coil housing at each of opposite ends of [said] the tension rod, wherein [said] the coil housing wraps around [said] the coil winding and is attached to [said] the tension rod.

IN THE SPECIFICATION

[0002] U.S. Patent Application Serial No. [__/___,___] 09/854,932 entitled "Superconducting Synchronous Machine Having Rotor And A Plurality Of Super-Conducting Field Coil Windings", filed May 15, 2001 (atty. dkt. 839-1004);

[0003] INTENTIONALLY LEFT BLANK -- DELETED

[0004] U.S. Patent Application Serial No. [__/___,___] 09/854,933 entitled "High Temperature Super-Conducting Rotor Coil Support With Split Coil Housing And Assembly Method", filed May 15, 2001 (atty. dkt. 839-1006);

[0005] U.S. Patent Application Serial No. [__/___,___] 09/854,931 entitled "Synchronous Machine Having Cryogenic Gas Transfer Coupling To Rotor With Super-Conducting Coils", filed May 15, 2001 (atty. dkt. 839-1007);

[0006] U.S. Patent Application Serial No. [__/___,___] 09/854,946 entitled "High Temperature Super-Conducting Rotor Coil Support With Tension Rods And Bolts And Assembly Method", filed May 15, 2001 (atty. dkt. 839-1009);

[0007] U.S. Patent Application Serial No. [__/___,___] 09/854,939 entitled "High Temperature Super-Conducting Coils Supported By An Iron Core Rotor", filed May 15, 2001 (atty. dkt. 839-1010);

[0008] U.S. Patent Application Serial No. [__/___,___] 09/854,938 entitled "High Temperature Super-Conducting Synchronous Rotor Having An Electromagnetic Shield And Method For Assembly", filed May 15, 2001 (atty. dkt. 839-1011);

[0009] U.S. Patent Application Serial No. [__/___,___] 09/854,940 entitled "High Temperature Super-Conducting Rotor Coil Support And Coil Support Method", filed May 15, 2001 (atty. dkt. 839-1012);

[0010] U.S. Patent Application Serial No. [__/___,___] 09/854,937 entitled "High Temperature Super-Conducting Rotor Having A Vacuum Vessel And Electromagnetic Shield And Method For Assembly", filed May 15, 2001 (atty. dkt. 839-1016);

[0011] U.S. Patent Application Serial No. [__/___,___] 09/854,944 entitled "A High Power Density Super-Conducting Electric Machine" filed May 15, 2001 (atty. dkt. 839-1019);

[0012] U.S. Patent Application Serial No. [__/___,___] 09/854,943 entitled "Cryogenic Cooling System For Rotor Having A High Temperature Super-Conducting Field Winding", filed May 15, 2001 (atty. dkt. 839-1062);

[0013] U.S. Patent Application Serial No. [__/___,___] 09/854,464 entitled "High Temperature Super-Conducting Racetrack Coil", filed May 15, 2001 (atty. dkt. 839-1063); and

[0014] U.S. Patent Application Serial No. [__/___,___] 09/855,034 entitled "High Temperature Super Conducting Rotor Power Leads", filed May 15, 2001 (atty. dkt. 839-1064).

IN THE CLAIMS

The changes to the claims are indicated below:

1. (Amended) In a synchronous machine, a rotor comprising:

a rotor core;

a super-conducting coil winding extending around at least a portion of the rotor core, said coil winding having a pair of side sections on opposite sides of said rotor core;

at least one tension rod extending between the pair of side sections of the coil winding and through said rotor, wherein each end of the tension rod is adjacent one of the side sections;

a coil housing at each of opposite ends of said tension rod, wherein said housing wraps around said coil winding and is attached to said tension rod.

16. (Amended) A method for supporting a super-conducting coil winding on a rotor core of a synchronous machine comprising the steps of:

d. extending a tension bar through a conduit in said rotor core, such that the ends of the tension bar are each adjacent the coil winding;

e. inserting a housing over a portion of the coil;

f. attaching an end of the tension bar to the housing.

21. (Amended) A rotor for a synchronous machine comprising:

a rotor core having a conduit orthogonal to a longitudinal axis of the rotor;

a racetrack super-conducting (SC) coil winding in a planar racetrack shape parallel to the longitudinal axis of the rotor;

a tension rod inside the conduit of the core, said tension having ends adjacent to the coil winding; and

a housing coupling the coil winding to the tension rod.